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## NOTICE OF ALLOWANCE AND FEE(S) DUE

7590

08/29/2005

John L Doughty  
ARRIS International Inc  
11450 Technology Circle  
Duluth, GA 30097

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OIPE/IAP

SEP 15 2005

EXAMINER

SHANG, ANNAN Q

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 08/29/2005

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/680,113	10/05/2000	Thomas J. Cloonan	4807.00003	8209

TITLE OF INVENTION: METHOD AND APPARATUS FOR DECREASING CABLE INSTALLATION TIME AND CABLE INSTALLATION FAULTS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$700	\$0	\$700	11/29/2005

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHT. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPO PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THE STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee Transmittal and pay the PUBLICATION FEE (if required) and 1 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issued on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is the patentee's responsibility to ensure timely payment of maintenance fees when due.

**PART B - FEE(S) TRANSMITTAL**

Complete and send this form, together with applicable fee(s), to: **Mail**

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**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed when appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of Fee(s) Transmittal. This certificate cannot be used for any other accompany papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

7590

08/29/2005

John L Doughty  
ARRIS International Inc  
11450 Technology Circle  
Duluth, GA 30097

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

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(Signature)
(Date)

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nonprovisional	YES	\$700	\$0	\$700	11/29/2005

EXAMINER	ART UNIT	CLASS-SUBCLASS
SHANG, ANNAN Q	2617	725-144000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).  
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list  
 (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,  
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.  
 1 \_\_\_\_\_  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_

**3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)**

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

**4a. The following fee(s) are enclosed:**

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

**4b. Payment of Fee(s):**

- ☐ A check in the amount of the fee(s) is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), or credit any overpayment Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

**5. Change in Entity Status (from status indicated above)**

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other part interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 14 Alexandria, Virginia 22313-1450.

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# UNITED STATES PATENT AND TRADEMARK OFFICE

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09/680,113	10/05/2000	Thomas J. Cloonan	4807.00003	8209
7590	08/29/2005		EXAMINER	
John L Doughty ARRIS International Inc 11450 Technology Circle Duluth, GA 30097			SHANG, ANNAN Q	
			ART UNIT	PAPER NUMBER
			2617	

DATE MAILED: 08/29/2005

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1091 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1091 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office Patent Legal Administration at (571) 272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

**Notice of Allowability**

Application No.

09/680,113

Examiner

Annan Q. Shang

Applicant(s)

CLOONAN ET AL.

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 04/14/05.
2. ☒ The allowed claim(s) is/are 1-27.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☒ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

CHRIS KELLEY

SUPERVISORY PATENT EXAMINER

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims 1-27 are allowed.
2. The following is an examiner's statement of reasons for allowance: With respect to independent claim 1 of the instant invention is directed to a cable modem termination system (CMTS) having front and rear sides, the front side accepting electronic cards, electronic signals from which are transferred through connectors mounted to the rear side. The relevant prior art of record such as **Liva et al (2002/0093966)**, disclose enhanced CMTS for reliability, availability and serviceability. **Palatov (5,740,020)** discloses a computer housing and expansion card design, facilitates addition and removal of expansion cards from the front of a computer housing without disassembling of the housing. **Caldara et al (6,748,474)** discloses a chassis in the form of a mid-plane design, holds equipment that provides communication services. **Clement (5,726,668)** discloses programmable graphics panels in a system. **Struger et al (4,151,580)** disclose a ser of circuit boards mounted side by side and electrical connection is made to terminal pads. However, neither **Liva, Palatov, Caldara, Clement** nor **Struger** and any of the cited references teach or suggest, alone or in combination, the feature of a connector extending through the first opening of the at least one pair of first and second openings and operationally coupled to a corresponding electronic circuit card installed at the front side of the CMTS and a light source, visible through the second opening of at least one pair of first and second openings, the illumination status of which is determined by the corresponding electronic

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card, as recited in the instant invention in combination with other features with respect to independent claim 1.

With respect to independent claim 10, neither **Liva, Palatov, Caldara, Clement** nor **Struger** and any of the cited references teach or suggest, alone or in combination, the feature of a connector extending through the first opening of the at least one pair of first and second openings and operationally coupled to a corresponding electronic circuit card installed at the front side of the CMTS, a controller connected to the first electronic circuit card for determining the status of channels associated with the first electronic circuit card and a light source visible through the second opening of at least one pair of first and second openings, the illumination status of which is determined by the controller, as recited in the instant invention in combination with other features with respect to independent claim 10.

With respect to independent claim 19, neither **Liva, Palatov, Caldara, Clement** nor **Struger** and any of the cited references teach or suggest, alone or in combination, the feature of a plurality of slots on the front side for accepting at least one electronic circuit card and a controller connected to each slot for determining whether an electronic circuit card is installed in the corresponding slot on the front side, as recited in combination with other features with respect to independent claim 19.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Budinger et al (6,802,032) disclose method and apparatus for performing system diagnostics on a cable modem termination system using a hand held computing device.

Follingstad et al (6,623,278) discloses high density patching system.

Miles (6,078,504) discloses universal adapter bracket for communications devices.

Lau (4,768,961) discloses Jackfield with front removable jack modules having lamp assemblies.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q. Shang** whose telephone number is **571-272-7355**. The examiner can normally be reached on **700am-400pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Christopher S. Kelley** can be reached on **571-272-7331**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.




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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC)** at **866-217-9197 (toll-free)**.



Annan Q. Shang.



CHRIS KELLEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

**Notice of References Cited**

Application/Control No.

09/680,113

Applicant(s)/Patent Under  
Reexamination  
CLOONAN ET AL.

Examiner

Annan Q. Shang

Art Unit

2617

Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,898,182	05-2005	Cloonan, Thomas J.	370/232
*	B	US-6,637,033	10-2003	Cloonan et al.	725/117
*	C	US-2002/0093966	07-2002	Liva et al.	370/400
*	D	US-6,802,032	10-2004	Budinger et al.	714/46
*	E	US-6,748,474	06-2004	Caldara et al.	710/301
*	F	US-6,798,341	09-2004	Eckel et al.	340/521
*	G	US-6,623,278	09-2003	Follingstad et al.	439/64
*	H	US-6,574,110	06-2003	Budinger et al.	361/729
*	I	US-6,477,424	11-2002	Thompson et al.	607/60
*	J	US-6,078,504	06-2000	Miles, Anthony Wayne	361/727
*	K	US-5,740,020	04-1998	Palatov, Dennis	361/796
*	L	US-5,726,668	03-1998	Clement, John L.	715/723
*	M	US-4,151,580	04-1979	Struger et al.	361/801

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.